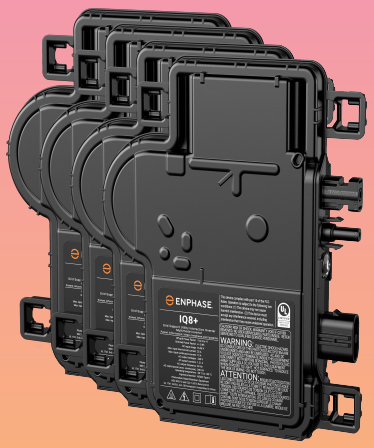
IQ8 Series Microinverters

Our newest IQ8 Microinverters[1, 2, 3] are the industry's first microgrid-forming[4], software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently.



Enphase 25 year limited warranty

UL CERTIFIED

Key specifications	IQ8	IQ8+	IQ8M	IQ8A	IQ8H-240	IQ8H-208
Peak output power	245 VA	300 VA	330 VA	366 VA	384 VA	366 VA
Nominal grid voltage (L-L)	240 V split-phase (L-L), 180°					208 V single-phase (L-L), 120°
Nominal frequency	60 Hz					
CEC weighted efficiency	97%	97%	97.5%	97%	97%	97%
Maximum input DC voltage	50 V	60 V	60 V	60 V	60 V	60 V
MPPT voltage range	27–37 V	27–45 V	30–45 V	32–45 V	36–45 V	36–45 V
Maximum module I_{sc}	20 A					
Ambient temperature range	–40°C to 60°C (–40°F to 140°F)					

Simple

- Lightweight and compact with plug-and-play connectors
- Power line communication (PLC) between components
- Faster installation with simple two-wire cabling

Reliable

- Produces power even when the grid is down[4]
- More than one million cumulative hours of testing
- Industry-leading limited warranty of up to 25 years
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- Complies with the latest advanced grid support [5]
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547:2018 (UL 1741-SB 3rd Ed.)

[1] IQ8 Series Microinverters can be added to existing IQ7 systems on the same IQ Gateway only in the following grid-tied configurations: Solar Only or Solar + Battery (IQ Battery 3T/10T and IQ Battery 5P) without backup.
[2] IQ7 Series Microinverters cannot be added to a site with existing IQ8 Series Microinverters on the same gateway. Mixed system of IQ7 and IQ8 will not support IQ8-specific PCS features and grid-forming capabilities.
[3] IQ Microinverters ship with default settings that meet North America's IEEE 1547 interconnection standard requirements. Region-specific adjustments may be requested by an Authority Having Jurisdiction (AHJ) or utility representative, according to the IEEE 1547 interconnection standard. Use an IQ Gateway to make these changes during installation.
[4] Meets UL 1741 only when installed with IQ System Controller 2 or 3.
[5] IQ8 Series Microinverters support split-phase, 240 V. IQ8H-208 supports single-phase, 208 V only.

Input data (DC)	Units	IQ8-60-M-US	IQ8PLUS-72-M-US	IQ8M-72-M-US	IQ8A-72-M-US	IQ8H-240-72-M-US	IQ8H-208-72-M-US[6]
Commonly used module pairings[7]	W	235–350	235-440	260-460	295-500	320-540	295-500
Module compatibility	—	To meet compatibility, PV modules must be within the following maximum input DC voltage and maximum module I_{sc} listed below. Module compatibility can be checked at https://enphase.com/installers/microinverters/calculator.					
MPPT voltage range	V	27–37	27–45	30–45	32–45	36–45	36–45
Operating range	V	16-48	16-58				
Min./Max.start voltage	V	22/48	22/58				
Max. input DC voltage	V	50	60				
Max.continuous input DC current	A	10	12				
Max.input DC short-circuit current	A	25					
Max. module I_{sc}	A	20					
Overvoltage class DC port	—	II					
DC port backfeed current	mA	0					
PV array configuration	—	Ungrounded array; no additional DC side protection required; AC side protection requires a maximum of 20 A per branch circuit.					

Output data (AC)	Units	IQ8-60-M-US	IQ8PLUS-72-M-US	IQ8M-72-M-US	IQ8A-72-M-US	IQ8H-240-72-M-US	IQ8H-208-72-M-US[6]
Peak output power	VA	245	300	330	366	384	366
Max. continuous output power	VA	240	290	325	349	380	360
Nominal (L-L) grid voltage	V	240, split-phase (L-L), 180°					208, single-phase (L-L),120°
Max. continuous output current	A	1.0	1.21	1.35	1.45	1.58	1.73
Nominal frequency	Hz	60					
Min./Max. grid voltage[8]	V	211–264					183–229
Extended frequency range	Hz	47–68					
AC short-circuit fault current over three cycles	A_{rms}	2					4.4
Maximum units per 20 A (L-L) branch circuit [9]	—	16	13	11	11	10	9
Total harmonic distortion	%	<5					
Overvoltage class AC port	—	III					
AC port backfeed current	mA	30					
Power factor setting	—	1.0					

[6] IQ8H-208 operates in grid-tied mode only at 208 VAC.
[7] No enforced DC/AC ratio.
[8] Nominal voltage range can be extended beyond nominal if required by the utility.
[9] Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

Output data (AC)	Units	IQ8-60-M-US	IQ8PLUS-72-M-US	IQ8M-72-M-US	IQ8A-72-M-US	IQ8H-240-72-M-US	IQ8H-208-72-M-US[6]
Grid-tied power factor (adjustable)	—	0.85 leading ... 0.85 lagging					
Peak efficiency	%	97.7	97.7	97.8	97.7	97.6	97.5
CEC weighted efficiency	%	97	97	97.5	97	97	97
Nighttime power consumption	mW	23	25	21	22	22	15

Mechanical data	IQ8-60-M-US	IQ8PLUS-72-M-US	IQ8M-72-M-US	IQ8A-72-M-US	IQ8H-240-72-M-US	IQ8H-208-72-M-US [6]
Ambient temperature range	–40°C to 60°C (–40°F to 140°F)					
Relative humidity range	4% to 100% (condensing)					
DC connector type	Stäubli MC4					
Dimensions (H × W × D)	212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2")					
Weight	1.1 kg (2.3 lb)					
Cooling	Natural convection—no fans					
Approved for wet locations	Yes					
Pollution degree	PD3					
Enclosure	Class II double-insulated, corrosion-resistant polymeric enclosure					
Environmental category/UV exposure rating	NEMA Type 6/Outdoor					

Compliance	IQ8-60-M-US	IQ8PLUS-72-M-US	IQ8M-72-M-US	IQ8A-72-M-US	IQ8H-240-72-M-US	IQ8H-208-72-M-US [6]
Certifications	CA Rule 21 (UL 1741-SA), UL 62109-1, IEEE 1547:2018 (UL 1741-SB 3rd Ed.), FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 NO. 107.1-01. This product is UL Listed as PV rapid shutdown equipment and conforms with NEC 2014, NEC 2017, NEC 2020, and NEC 2023 section 690.12 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems, for AC and DC conductors, when installed according to the manufacturer's instructions.					

Components of the Enphase Energy System

IQ Battery

All-in-one AC-coupled storage solution that integrates seamlessly with your solar energy system, providing reliable backup power and intelligent energy management for maximum performance and energy savings.

IQ System Controller

The IQ System Controller connects the home to the grid power, IQ Batteries, generator and solar PV with microinverters.

IQ Combiner/IQ Gateway

The IQ Combiner/IQ Gateway is a device that performs energy management, provides internet connectivity, and integrates with the IQ Series Microinverters to provide complete control and insights into the Enphase Energy System.

IQ Cable

The IQ Cable is a continuous-length 12-AWG cable with pre-installed connectors for IQ Microinverters that support faster, simpler, and more reliable installations. The cable is handled like standard outdoor-rated electrical wire, allowing it to be cut, spliced, and extended as needed.

Revision history

Revision	Date	Description
DSH-00380-2.0	December 2024	Updated information on backward compatibility with IQ7 Series Microinverters.
DSH-00380-1.0	February 2024	Updated the information about IEEE 1547 interconnection standard requirements.